

|                     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Country             | : |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Category            | : | G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Abs. Jour           | : | Ref Zhur - Khim., No 5, 1959, No. 15277                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Author              | : |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Institut.           | : |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Title               | : |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Orig Pub.           | : |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Abstract<br>cont'd. | : | <p><math>RCH(CHO)_2</math> from acetaldehydes (Ref Zhur-Khim, 1958, 39539). According to an analogous scheme, the interaction of I occurs with aminoketones <math>R'COCH=CR''N(CH_3)_2</math> [<math>R' = CH_3</math>, <math>R'' = H</math> (VI), <math>R' = R'' = CH_3</math> (VI), <math>R' + R'' = (CH_2)_3</math> (VIII)], from which the salts <math>[(CH_3)_2NCR' = CHCR'' = N(CH_3)_2]^+ ClO_4^-</math> (IX, X, XI).<sup>*</sup> In the case of IV, <math>R = H</math> (IVa), <math>(CH_3)_2NH_2I</math> can be used in the reaction instead of II (boiling in <math>C_4H_9OH</math> for one hour),<br/> <sup>*</sup> are obtained.</p> |
| Card:               | : | 2/6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

Country :  
Category :

G

Abstr. Jour : Ref Zhur - Khim., No 5, 1959, No. 15277

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract : yielding V, R=H, X=I (Va), 80%, m.p. 187-  
cont'd. 188°; picrate, m.p. 142.5°. With a 55% yield,  
Va is also formed from the Na salt  $\text{CH}_2(\text{CHO})_2$   
(XII salt) and  $(\text{CH}_3)_2\text{NH}_2\text{I}$ . 0.05 mole of I is  
heated with 0.1 mole of II for six hours, I and  
II are distilled up to 125°/10 mm., and heated  
anew; the yield of III is 95%, m.p. 142.5-144°  
(from II), very hygroscopic. By treatment with  
 $\text{NaClO}_4$  in alcohol, III is transformed into a  
stable perchlorate  $\text{C}_5\text{H}_{13}\text{O}_4\text{N}_2\text{Cl}$ , m.p. 135.5 to

Card: 3/6

G - 6

Country :  
Category : G

Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15277

Author :  
Institut. :  
Title :

Orig Pub. :

Abstract : 136.5° (from alcohol). From I and IVa in C<sub>6</sub>H<sub>6</sub>  
cont'd. (3 days, 20°), V is obtained, R=H, X=Cl,  
yield 92%. Likewise from IV, R=iso-C<sub>3</sub>H<sub>7</sub>, 35%  
of V is obtained, R=iso-C<sub>3</sub>H<sub>7</sub>, X=Cl; picrate,  
m.p. 91.5-92.5° (from alcohol). 0.05 mole of  
VI and 0.55 mole of I are heated for 90 hours  
up to 50-55°, diluted with C<sub>6</sub>H<sub>6</sub>, the residue  
is dissolved in water and IX is precipitated,  
yield 30%, m.p. 159-161° (from alcohol and  
from water). Analogously, the yield of X from

Card: 4/6

G - 7

Country :  
Category :  
Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15277  
Author :  
Institut. :  
Title :  
Orig. Pub. :  
Abstract : yielding V, R=H, X=I (Va), 80%, m.p. 187-  
cont'd. 188°; picrate, m.p. 142.5°. With a 55% yield,  
Va is also formed from the Na salt  $\text{CH}_2(\text{CHO})_2$   
(XII salt) and  $(\text{CH}_3)_2\text{NH}_2\text{I}$ . 0.05 mole of I is  
heated with 0.1 mole of II for six hours, I and  
II are distilled up to 125°/10 mm., and heated  
anew; the yield of III is 95%, m.p. 142.5-144°  
(from II), very hygroscopic. By treatment with  
 $\text{NaClO}_4$  in alcohol, III is transformed into a  
stable perchlorate  $\text{C}_5\text{H}_{13}\text{O}_4\text{N}_2\text{Cl}$ , m.p. 135.5 to  
Card: 3/6

G - 6

Country : G  
Category :  
Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15277  
Author :  
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Title :  
Orig Pub. :  
Abstract : 136.5° (from alcohol). From I and IVa in C<sub>6</sub>H<sub>6</sub>  
cont'd. (3 days, 20°), V is obtained, R=H, X=Cl, yield 92%. Likewise from IV, R=iso-C<sub>3</sub>H<sub>7</sub>, 35% of V is obtained, R=iso-C<sub>3</sub>H<sub>7</sub>, X=Cl; picrate, m.p. 91.5-92.5° (from alcohol). 0.05 mole of VI and 0.55 mole of I are heated for 90 hours up to 50-55°, diluted with C<sub>6</sub>H<sub>6</sub>, the residue is dissolved in water and IX is precipitated, yield 30%, m.p. 159-161° (from alcohol and from water). Analogously, the yield of X from  
Card: 4/6

G

Country :  
Category :

Abs. Jour : Ref Zhur - Khim., No 5, 1959,

No. 15277

Author :  
Institut. :  
Title :

Orig. Pub. :

Abstract  
cont'd.

: VII is 15%, m.p. 153-154° (from alcohol and from water). VIII and I (0.01 mole each) are heated for 18 hours at 50-55°, analogously to IX, XI is separated, yield 74%, m.p. 183-184°. By boiling 0.02 mole of XII with 0.04 mole of  $\text{CH}_3\text{NH}_3\text{I}$  in  $\text{C}_4\text{H}_9\text{OH}$  for 30 minutes,  $[\text{CH}_3\text{NHCH}=\text{CHCH}=\text{NHCH}_3]\text{I}$  was synthesized, yield 69.8%, m.p. 175-176°; picrate, m.p. 134.5-135.5° (from alcohol). Yields of quaternary salts from  $(\text{CH}_3)_2\text{NCOBr}$  [obtained by saturation of I with

Card: 5/6

G - 7

Country : G  
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Abs. Jour : Ref Zhur - Khim., No 5, 1959, No. 15277  
Author :  
Institut. :  
Title :  
Orig Pub. :  
Abstract : HBr (gas), yield 90%, b.p. 64-64.5°/8 mm.,  
cont'd. n<sup>20</sup><sub>D</sub> 1.4960] do not exceed yields from I. All  
melting temperatures were corrected.-- Jan  
Kovar

Card: 6/6

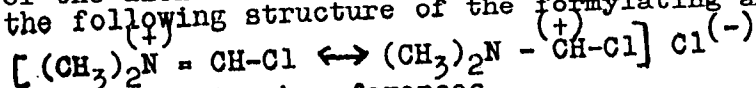
AUTHOR: Arnold, Zdeněk

CZ/8/52(82)/10-35/39

TITLE: A Note on the Nature of the Formylation Agent from Dimethylformamide and Phosgene (K otázce povahy formylačního činidla z dimethylformamidu a fosgenu)

PERIODICAL: Chemické Listy, 1958, Vol 52(82), Nr 10, pp 2013-2014 (Czechoslovakia)

ABSTRACT: The preparation of  $\beta$ -dimethylaminoacrolein by a formylating reagent, prepared from dimethylformamide and phosgene has been reported (Ref 1). The use of the chloroform solution, as opposed to the earlier use of the dichloroethane precipitate gives evidence for the following structure of the formylating agent:



There are 2 Czech references.

ASSOCIATION: Oddělení organické synthesy, Chemický ústav, Československá akademie věd, Praha (Organic Synthesis Division, Institute of Chemistry, Czechoslovak Ac.Sc. Prague)

SUBMITTED: May 5, 1958

Card 1/1



COUNTRY : Czechoslovakia 8-2  
CATEGORY :  
ABS. JOUR. : RZKhim., No. 1959, No. 8(514)  
AUTHOR : Arnold, Z.  
INST. :  
TITLE : The Preparation of Tetramethylformamidinium  
Salts and Their Vinylogues.  
ORIG. PUB. : Collect. Czechosl. Chem. Commun, 1959, 24,  
No 3, 760-765  
ABSTRACT : See RZKhim, 1959, No 5, 15277.

CARD:

FINCH 2, 2

2Mang fE2c (j)

Distr: 4E2c(j)

7  
Synthetic reactions of dimethylformamide. II. The reaction of ketals with dimethylformamide and phosgene. Zdeněk Arnold and Jiří Žemlička (Czechoslov. akad. věd, Prague). Collection Czechoslov. Chem. Commun. 24, 780-90 (1959) (in English).—See C.A. 53, 4104a. Jiří Pilný

II  
V<sub>1</sub>

gij

ARNOLD, Z.

Synthetic reactions of dimethylformamides. III. Preparation of  $\beta$ -chlorovinyl aldehydes. Z. Arnold and J. Zemlička (Českoslov. akad. věd, Prague). Collection Czechoslov. Chem. Commun. 24, 2378-84 (1959) (in German); cf. C.A. 53, 6067c, 11206d. — The prepn. of  $\text{ClCH:CRCHO}$  [ $R = H$  (I),  $\text{Me}$  (II),  $\text{Et}$  (III),  $\text{Am}$  (IV),  $\text{Ph}$  (V),  $\text{PACH}$  (VI)],  $\text{PACCl:CMcCHO}$  (VII), and  $\text{ClCH:CMcCOPh}$  (VIII) was given. The  $\beta$ -chlorovinyl aldehydes were unstable even at  $0^\circ$  in sealed ampuls; they gave a pos. reaction with  $2,4\text{-(O}_2\text{N)}_2\text{C}_6\text{H}_3\text{NHNH}_2$  and a neg. reaction with  $\text{FeCl}_3$ ; the Cl atom reacted readily with  $\text{Me}_3\text{NH}$  with the formation of the corresponding  $\beta$ -dimethylamino compd., which gave a characteristic coloration with  $\text{FeCl}_3$ . Excess (about 50 g.)  $\text{COCl}_2$  was introduced with stirring and cooling with NaCl-ice mixt. into 18.8 g. anhyd.  $\text{CH}_3\text{CHO}$ , Na salt and stirring was continued 90 min. Filtering off the ppt., washing with  $\text{Et}_2\text{O}$ , evapg. the filtrates *in vacuo* (bath temp. below  $40^\circ$ ), and distg. gave 13.2 g. I,  $b_p$   $37\text{--}41^\circ$ ,  $n_D^{20}$  1.4823. Similarly, the  $\text{HCOCH:CHCH}_2\text{CHO}$  Na salt gave 55%  $\text{ClCH:CHCH:CHCHO}$ , m.  $57^\circ$  (cyclohexane). Treating a suspension of 8.12 g.  $\text{HOCH:CMcCOPh}$  in 100 ml.  $\text{C}_6\text{H}_6$  with 23 ml. 4.35N  $\text{Me}_3\text{NH}$  in  $\text{C}_6\text{H}_6$ , keeping the mixt. 1 hr. at room temp., evapg., adding again 23 ml., and distg. the next day gave 6.54 g.  $\text{Me}_3\text{NCH:CMcCOPh}$  (IX),  $b_p$   $127\text{--}130^\circ$ , m.  $45.5\text{--}7^\circ$  ( $\text{Et}_2\text{O}$  at  $-15^\circ$ ). Heating 13 hrs. in an autoclave on a steam bath 4.5 g.  $\text{ClCPH:C-MeCHO}$  with 50 ml. 4.38N  $\text{Me}_3\text{NH}$  in  $\text{C}_6\text{H}_6$ , filtering off the pptd.  $\text{Me}_3\text{NH}_2\text{Cl}$ , evapg. *in vacuo*, dissolving the residue in 200 ml.  $\text{H}_2\text{O}$ , extg. the soln. with petr. ether, satg. the aq. layer with  $\text{K}_2\text{CO}_3$ , extg. with  $\text{C}_6\text{H}_6$ , drying the exts. with  $\text{K}_2\text{CO}_3$ , and distg. gave 3.1 g.  $\text{Me}_3\text{NCPH:CMcCHO}$ ,  $b_p$   $145\text{--}150^\circ$  (bath temp.).  $\text{COCl}_2$  (0.025 mole) in  $\text{CHCl}_3$  was added dropwise in 5 min. with stirring and cooling into 0.01 mole  $\text{Me}_3\text{NCH:CMcCHO}$  in 5 ml.  $\text{CHCl}_3$  and the mixt.

was stirred 45 min. at room temp. (evolution of  $\text{CO}_2$ ); evapg. *in vacuo* gave an unstable cryst. residue [ $\text{Me}_3\text{N:C-HCMe:CHCl}$ ] $\text{Cl}$ , which was decompd. with stirring and cooling (ice) by the addn. of 25 ml.  $\text{H}_2\text{O}$  and 20 ml.  $\text{Et}_2\text{O}$ . Extg. the aq. layer with  $\text{Et}_2\text{O}$ , combining the  $\text{Et}_2\text{O}$  exts., washing with  $\text{H}_2\text{O}$ , 1:1 aq.  $\text{NaHCO}_3$ , and  $\text{H}_2\text{O}$ , drying ( $\text{MgSO}_4$ ), and distg. gave 56% II,  $b_p$   $53\text{--}60^\circ$ ,  $n_D^{20}$  1.4800. Similarly were prepd.: III (84%),  $b_p$   $50\text{--}5^\circ$ ,  $n_D^{20}$  1.4745; V (86%),  $b_p$   $60^\circ$ , m.  $25\text{--}0^\circ$  ( $\text{Et}_2\text{O}$  at  $-70^\circ$ ); VI (84%),  $b_p$   $85\text{--}90^\circ$ , m.  $32\text{--}3^\circ$  (petr. ether at  $-15^\circ$ ); VII (62%),  $b_p$   $100\text{--}5^\circ$  (bath temp.); VIII (24%),  $b_p$   $90\text{--}3^\circ$  (bath temp.). In the prepn. of III (70%) and IV (79%),  $b_p$   $100^\circ$ ,  $n_D^{20}$  1.4718, 0.011 mole  $\text{POCl}_3$  in  $\text{CHCl}_3$  was also used instead of  $\text{COCl}_2$ .  $\beta\text{-MeC}_6\text{H}_4\text{SO}_2\text{Cl}$  with  $\text{Me}_3\text{NCH:CH:CHO}$  in  $\text{C}_6\text{H}_6$  soln. in a mole ratio 1:1 gave only 25% III. Keeping 10 mg. VIII 2 days with 1 ml. 4.38N  $\text{Me}_3\text{NH}$  in  $\text{C}_6\text{H}_6$  gave IX,  $R_f$  0.05 (by chromatography on a paper impregnated with  $\text{HCONMe}_2$  and development with cyclohexane). A surprising stability of the unsubstituted salt [ $\text{Me}_3\text{N:CHCH:CHCl}$ ] $\text{Cl}$  (m. not given) towards hydrolysis is mentioned in contrast to the behavior of the substituted derivs. IV. Preparation of  $\beta$ -chlorovinyl aldehydes from carbonyl compounds. *Ibid.* 2385-92. — Reactions of  $\text{RCO:CH}_2\text{R'}$  with  $\text{HCONMe}_2$  and  $\text{POCl}_3$  in a molar ratio 1:3: 2.5 gave  $\text{ClCR:CR'CHO}$  ( $R, R'$ , reaction time, bath temp., yield, b.p., and  $n_D^{20}$  given:  $\text{Me}, H$ , 45 or 30 min.,  $20^\circ$  or  $35\text{--}40^\circ$ , 38%,  $b_p$   $60\text{--}65^\circ$  (bath temp.), 1.4790;  $\text{Me}, \text{Me}$  (I), 35 min.,  $35\text{--}40^\circ$ , 67%,  $b_p$   $53\text{--}5^\circ$ , 1.4915;  $\text{Et}, \text{Me}$ , 30 min.,  $35\text{--}40^\circ$ , 77%,  $b_p$   $57^\circ$ , 1.4871;  $\text{Ph}, H$  (II), 2 hrs.,  $40\text{--}45^\circ$ , 47%,  $b_p$   $99\text{--}103^\circ$ , 1.6168 [semicarbazone, m.  $200\text{--}7^\circ$  ( $\text{EtOH}$ )]];  $\text{Ph}, \text{Me}$  (III), 3 hrs.,  $40\text{--}45^\circ$ , 91%,  $b_p$   $117^\circ$ , 1.5833 (semicarbazone m.  $154\text{--}5^\circ$ ); ( $\text{RR}' = \text{C}_6\text{H}_5$ ) (IV), 1 hr. or 30 min.,  $20^\circ$  or  $35\text{--}40^\circ$ , 66%,  $b_p$   $58^\circ$ , 1.5102; ( $\text{RR}' = \text{C}_6\text{H}_5$ ), 20 min.,  $20\text{--}40^\circ$ , 54%,  $b_p$   $87^\circ$ , 1.5225; ( $\text{RR}' = \text{C}_6\text{H}_5$ ), 40 min.,  $35\text{--}40^\circ$ , 65%,  $b_p$   $95\text{--}8^\circ$ , 1.5227; ( $\text{RR}' = \text{C}_6\text{H}_5$ ), 45 min.,  $35\text{--}40^\circ$ , 63%,  $b_p$   $135\text{--}40^\circ$  (bath temp.), 1.5247. Similarly, only 28%  $\text{ClCH:CEtCHO}$ ,  $b_p$   $62\text{--}8^\circ$ , was prepd. from  $\text{PrCHO}$ . The ketone (0.05 mole) added

Arnold, Z., and Žomlčka, J.

In 5-15 min. with stirring and ice-cooling into the reagent (prepd. by treating in 5-15 min. at 0° 11.3 ml. POCl<sub>3</sub> with 11 g. HCONMe<sub>2</sub> and stirring 30 min. at room temp.). The mixt. is kept 30-90 min. in a bath at 20-40° and decompd. with 150 g. ice. The product is isolated by extn. with Et<sub>2</sub>O, washing the exts. with aq. NaHCO<sub>3</sub> or Na<sub>2</sub>CO<sub>3</sub> or NaOH, resp., to remove any hydroxymethylketone RCOCR', CHOII present, and distg.; in some cases, the decompd. mixt. is neutralized with solid NaHCO<sub>3</sub>, steam distd., the distillate satd. with NaCl, the product extd. with Et<sub>2</sub>O, and distd. Only traces of the isomeric ClCBr:CHCHO (V) were detd. in the prepn. of I from MeCOEt. Treating V with 4.38N Me<sub>2</sub>NH in C<sub>6</sub>H<sub>6</sub> and keeping the mixt. 3 days at room temp. gave Me<sub>2</sub>NCH:CHCOEt (VI) (R<sub>f</sub> 0.33 by paper chromatography in iso-Pr<sub>2</sub>O-H<sub>2</sub>O), the product of a rearrangement. VI, b<sub>p</sub> 99.5-101°, was also prepd. from ClCH:CHCOEt and Me<sub>2</sub>NH in 1:1 C<sub>6</sub>H<sub>6</sub>-MeCH<sub>3</sub>. I, b<sub>p</sub> 68° (bath temp.), n<sub>D</sub><sup>20</sup> 1.4917, was prepd. (yield 68%) from Me<sub>2</sub>NCH:CMcCOMe (VII) and COCl<sub>2</sub>. Similarly, authentic V, b<sub>p</sub> 68-62°, n<sub>D</sub><sup>20</sup> 1.4748, was prepd. (yield 18%) from VI and COCl<sub>2</sub>. Adding with agitation in 10 min. at 0° 0.05

mole *tert*-BuCOMe into a reagent prepd. from 0.25 mole Me<sub>2</sub>NH and 0.125 mole COCl<sub>2</sub> (*loc. cit.*), heating the mixt. 1.5 or 3.5 hrs. to 70° or 65°, resp., decompg. with 0.2 mole anhyd. NaOAc and 100 g. ice, sep. the layers, extg. the aq. layer with (CH<sub>2</sub>Cl)<sub>2</sub>, combining the exts., washing with H<sub>2</sub>O, drying (MgSO<sub>4</sub>), and distg. gave 80% ClC(*tert*-Bu):CHCHO (VIII), b<sub>p</sub> 85-90° (bath temp.), n<sub>D</sub><sup>20</sup> 1.4789. Similarly, PhCOEt gave 60% III. Reactions of the HCONMe<sub>2</sub>:COCl<sub>2</sub> reagent with PhCOPr-iso and ClCPh:CH<sub>2</sub> failed. Reaction of II with excess 4N Me<sub>2</sub>NH in C<sub>6</sub>H<sub>6</sub> gave [Me<sub>2</sub>NCH:CHCH:NMe<sub>2</sub>]Cl (*picrate*, m. 90-1° (EtOH)), and traces of Me<sub>2</sub>NCH:CHCHO, R<sub>f</sub> 0.41 by paper chromatography with CH<sub>2</sub>(OBU)-H<sub>2</sub>O. Heating 1 hr. on a steam bath in an autoclave 5 g. VIII with 23 ml. 4.35N Me<sub>2</sub>NH in C<sub>6</sub>H<sub>6</sub>, cooling, filtering off the Me<sub>2</sub>NH<sub>2</sub>Cl, washing with C<sub>6</sub>H<sub>6</sub>, and distg. gave 45% Me<sub>2</sub>NCH:CHCOBU-*tert*, b<sub>p</sub> 115°, m. 38.5° (Et<sub>2</sub>O at -15°). Treating IV with Me<sub>2</sub>NH in C<sub>6</sub>H<sub>6</sub> at room temp. gave 2-dimethylamino-1-cyclopentenecarboxaldehyde (R<sub>f</sub> 0.06) and 2-dimethylaminomethylenecyclopentanone (R<sub>f</sub> 0.26) as shown by aminomethylenecyclopentanone (R<sub>f</sub> 0.26) in CH<sub>2</sub>(OBU)-H<sub>2</sub>O. The Benary paper chromatography in CH<sub>2</sub>(OBU)-H<sub>2</sub>O. The Benary method (C.A. 24, 4507) was used to prep. VII, R<sub>f</sub> 0.04 (iso-Pr<sub>2</sub>O-H<sub>2</sub>O), m. 40° (Et<sub>2</sub>O). JH Plim

ARNOLD, Z.; ZEMLICKA, J.

Reaction of formamidine salts and their vinylogs with carbanions.  
Coll Cz Chem 25 no.5:1302-1307 My '60.

1. Abteilung für organische Synthesen, Chemisches Institut,  
Tschechoslowakische Akademie der Wissenschaften, Prag.

ARNOLD, Z.

Synthetic reactions of dimethylformamides. Part 5: Synthesis of  
nicotinaldehydes. Coll Cz Chem 25 no.5:1308-1312 My '60.

1. Abteilung für organische Synthesen, Chemisches Institut,  
Tschechoslowakische Akademie der Wissenschaften, Prag.

ARNOLD, Z.

Synthetic reactions of dimethylformamides. Part 6: Formylation of cyclopentadienes. Coll Cz Chem 25 no.5:1313-1317 My '60.

1. Abteilung für organische Synthesen, Chemisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.

ARNOLD, Z.; ZEMLICKA, J.

Synthetic reactions of dimethylformamides. Part 7: Production of  
triformylmethane. Coll Cz Chem 25 no.5:1318-1323 My '60.

1. Abteilung für organische Synthesen, Chemisches Institut,  
Tschechoslowakische Akademie der Wissenschaften, Prag.



ARNOLD, Z.

Synthetic reactions of dimethylformamide. Part 8: Synthesis of the dinitrile of N,N-dimethylaminomalonic acid and trimethylammoniumdicyanomethylid. Coll Cz Chem 26 no.4:1113-1117 Ap '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

(Formamide)

ARNOLD, Z.

SURNAME, Given Names

Country: Czechoslovakia

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Affiliation: Institute of Organic Chemistry and Biochemistry,  
Czechoslovak Academy of Sciences, Prague

Sources: Prague, Collection of Czechoslovak Chemical Communications,  
Vol 26, No 11, November 1961, pp 2852-2864

Data: "Synthetic Reactions of Dimethylformamide. X. Synthesis  
and Reactions of Some Triformyl Derivatives of Acetone  
and Methyl Ethyl Ketone."

Authors:

ZENLICKA, J  
ARNOLD, Z

Also: Vol 26, No 11, pp 2852-2864

"XI. Polyformylation of Ketones of Other Types  
and the Problem of the Reaction Course."

ARNOLD, Z.

Synthetic reactions of dimethylformamide. Part 12: Formylation of some carbolyxic acids and their derivates. Coll Cz Chem 26 no.12:3051-3057 D '61.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague,

S/081/63/000/004/015/051  
B166/B186

AUTHORS: Arnold, Z., Holý, A.

TITLE: Synthetic reactions of dimethylformamide. XIII.  $\beta$ -bromovinylaldehydes

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 222, abstract 4Zh71 (Collect. Czechosl. Chem. Commun., v. 26, no. 12, 1961, 3059 - 3073 [Eng.; summary in Russ.])

TEXT: The article describes the preparation of  $\beta'$ -bromovinylaldehydes  $\text{BrCR} = \text{CH}'\text{CHO}$  (I) by formylating ketones  $\text{RCOCH}_2\text{R}'$  (II) by means of a complex of  $(\text{CH}_3)_2\text{NCOH}$  (III) with  $\text{PBr}_3$  or  $\text{POBr}_3$ , or else  $[(\text{CH}_3)_2\text{N} = \text{CHBr}]^+\text{Br}^-$  (IV) obtained from an analogous chlorine derivative and  $\text{HBr}$ .  $[\text{BrCR} = \text{CH}'\text{CH} = \text{N}(\text{CH}_3)_2]^+$   $\text{X}^-$  salts (V) are formed intermediately; these are stable when  $\text{R}' = \text{H}$ , and are either hydrolyzed into unstable I or converted immediately into semicarbazones (SC) of I. I oximes (OX) are also easily formed and are stable with the exception of the I OX where  $\text{R}' = \text{H}$ . I diethylacetal  $[\text{R}, \text{R}' = (\text{CH}_2)_4]$  (VI) was found to be unstable and turned into  $\text{CH}_2(\text{CH}_2)_2\text{CH} = \text{CBrC} = \text{CHOC}_2\text{H}_5$  (VII).  
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Synthetic reactions of...

S/081/63/000/004/015/051  
B166/B186

I (R = H) is synthesized from  $\text{HCOCR}' = \text{CHN}(\text{CH}_3)_2$  (VIII). The UV and IR spectra of I, I SC and OX are given and discussed. 34 ml 2.2 M solution of reagent made from III,  $\text{COCl}_2$  (0.075 mole) in  $\text{CHCl}_3$  (in accordance with RZhKhim, 1960, no. 1, 1134) are saturated at  $0^\circ\text{C}$  with HBr and evaporated in vacuo, yield of IV ~98 %, m.p.  $156 - 158^\circ\text{C}$  (sublimation at 0.2 mm Hg).  
Method A: To 0.15 moles III in 40 ml  $\text{CHCl}_3$  are added at  $0^\circ\text{C}$  0.125 moles  $\text{PBr}_3$ , then 0.05 moles II in 20 ml  $\text{CHCl}_3$ ; this is evaporated in vacuo, decomposed with ice and quickly neutralized with solid  $\text{NaHCO}_3$  at  $0^\circ\text{C}$ ; it is then extracted with ether and the extract washed with saturated  $\text{NaHCO}_3$  solution.  
Method B: To 0.075 moles IV in 25 ml  $\text{CHCl}_3$  are added 0.025 moles II in 15 ml  $\text{CHCl}_3$  at  $0^\circ\text{C}$ ; on completion of the reaction it is processed as in method A.  
Method C: The same as A using 0.075 moles IV and 0.05 moles VIII. Extraction with ether is sometimes replaced by rapid steam distillation. Below are given R, R', method of synthesizing I, yield %, reaction temperature in  $^\circ\text{C}$ , mixing time in hrs, b.p. in  $^\circ\text{C}/\text{mm Hg}$ ,  $n_D^{20}$ , m.p. in  $^\circ\text{C}$  (from alcohol) of SC,  
Card 2/5

Synthetic reactions of...

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in brackets the yield % for SC produced from the reaction mixture by method B or C, m.p. of OX (from cyclohexane, subl.), in brackets the yield % for OX produced from the reaction mixture by method A: H, H, C, -, 20, 3, -, -, 142 (from 50% alcohol) (23), -, CH<sub>3</sub>, H, B, 27 (yield by method A 20%), 60, 1, 53/11 (bath temp.), 1.5202, 158-159 (from 50% alcohol) (37), -, (CH<sub>3</sub>)<sub>3</sub>, H, A, 75, 60, 4, 95/12 (bath temp.), 1.5005, 200, -, C<sub>6</sub>H<sub>5</sub>, H, B, 68 (by method A 45%), 60, 1.5, 106-107/0.7 (bath temp.), 1.6368, 195, -, H, CH<sub>3</sub>, C, 82, 50, 1, 60/60 (bath temp.), 1.5175, 161 - 162, -, CH<sub>3</sub>, CH<sub>3</sub>, A 36, 60.7, 30/0.25 (bath temp.), 1.5220, 186 - 187 (70), 87 - 88, (36), C<sub>6</sub>H<sub>5</sub>, CH<sub>3</sub>, A, 71 (by method B 11%), 60, 5, 76/0.5, 1.6065, 82 - 84 (from 50% alcohol) (after melting, a compound with m.p. 138 - 141°C crystallizes out), 132-133, H, C<sub>6</sub>H<sub>5</sub>, C, 75, 50, 1, 82/0.5 (bath temp.) (m.p. 47°C), -, 155 - 157 (45), -, CH<sub>3</sub>, C<sub>6</sub>H<sub>5</sub>, B, 56 (by method A 25 %), 60, 1, 83/0.4 (bath temp.), 1.5965, 175 - 176, 127 - 128 (46), C<sub>6</sub>H<sub>5</sub>, C<sub>6</sub>H<sub>5</sub>, A, 75, 60, 3, -, (m.p. 165°C from alcohol), -, 183 - 184, 197; RR' = (CH<sub>2</sub>)<sub>3</sub>, 45 (by method B 31%), 20, 12, 45 - 47/1.5 (bath temp.), 1.5437, 185 - 186 (50), 112 - 113 (74); RR' = (CH<sub>2</sub>)<sub>4</sub>  
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Synthetic reactions of...

(Ia), A, 54, 20, 12, 51/0.7, 1.5482, 214 - 215 (62), 106 - 107 (36);  
RR' = (CH<sub>2</sub>)<sub>5</sub>, B, 67 (by method A 45 %), 65, 1.5, 62 - 63/0.3 (bath temp.),  
1.5465, 190 - 191, 56 - 67 (from petr. ether); RR' = (CH<sub>2</sub>)<sub>6</sub>, B, 63 (by method  
A 37 %), 65, 1.5, 70 - 72/0.9, 1.5457, 181 - 182, 97; II (R = C<sub>6</sub>H<sub>5</sub>, R' = H)  
is processed by method A or B; after decomposition with ice NaClO<sub>4</sub> is added  
to the reaction mixture, giving V (R = C<sub>6</sub>H<sub>5</sub>, R' = H, X = ClO<sub>4</sub>) (Va), yield  
50 and 76 % respectively, m.p. 158 - 159°C (from acetone + ether). In the  
same way, using method A V [R = (CH<sub>3</sub>)<sub>3</sub>C, R' = H, X = ClO<sub>4</sub>] (Vb) is obtained,  
yield 84 %, m.p. 142 - 144°C, 0.012 moles Va are introduced into a boiling  
aqueous solution of CH<sub>3</sub>COONa, I (R = C<sub>6</sub>H<sub>5</sub>, R' = H) is distilled off with  
steam, yield 90%. The yield of I [R = (CH<sub>3</sub>)<sub>3</sub>C, R' = H] (from Vb) is 92%.  
0.007 moles of I SC are added to a boiling solution of 0.15 moles (COOH)<sub>2</sub> in  
50 ml water, I is distilled off with steam. Below are given R, R', % yield  
of I: C<sub>6</sub>H<sub>5</sub>, CH<sub>3</sub>, 85; CH<sub>3</sub>, H, 30; CH<sub>3</sub>, CH<sub>3</sub>, 50; RR' = (CH<sub>2</sub>)<sub>3</sub>, 29;  
1/5 RR' = (CH<sub>2</sub>)<sub>4</sub>, 27. Cyclohexanone is formylated by method A (60°C, 2 hrs),  
0.007 moles of I SC

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decomposed with 100 g ice with 50 g  $\text{CH}_3\text{COONa}$ , Ia is extracted with ether, 0.13 g 1-brom-2,6-diformylcyclohex-1-ene is filtered off, m.p. 129 - 130°C. VI is obtained from 0.03 moles Ia with 10 ml abs. alcohol and 0.047 moles  $\text{HC}(\text{OC}_2\text{H}_5)_3$  (20°C, 20 hrs) by vacuum distillation with anhydrous  $\text{K}_2\text{CO}_3$ , yield 85%, b.p. 74°C/0.9 mm Hg,  $n_D^{20}$  1.4865. Without  $\text{K}_2\text{CO}_3$  VII is obtained, yield 77%, b.p. 119 - 120°C/12 mm Hg,  $n_D^{20}$  1.5460. For communication XII see RZhKhim, 1962, no. 16, 16Zh68. [Abstracter's note: Complete translation.]

Card 5/5



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VKHO 7 no.4:390-395 '62. (MIRA 15:8)  
(Formylation)

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N,N-dimethylchloroformiminium chloride as a reagent in peptide synthesis.  
Coll Cz Chem 27 no.9:2252 S '62.

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Synthetic reactions of dimethylformamide. Pts. 16-17. Coll  
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1. Institut fur organische Chemie und Biochemie, Tschechoslowakische  
Akademie der Wissenschaften, Prag.

ARNOLD, Z; HOLÝ, A.

Czechoslovakia

Institute of Organic Chemistry and Biochemistry,  
Czechoslovak Academy of Science -- Prague - (for all)

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2



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Institute of Organic Chemistry and Biochemistry of the  
Czechoslovak Academy of Sciences, Prague (for both)

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No 8, 1963, pp 2040-2045

"Synthetic Reactions of Dimethylformamide. XVIII.  
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Czechoslovak Academy of Sciences, Prague

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paration of alpha,alpha-Difluorotrimethylamine and  
Some of its Reactions."

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ARNOLD, Z.; KORNILOV, M.

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1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences (for Arnold). 2. Kiev State University, Institute of Organic Chemistry, SSR (for Kornilov).

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Activity of dimethylformamide acetals. Zhur.ob.khim. 34 no.2:700-701  
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1. Institut organicheskoy khimii i biokhimii Akademii nauk Chekhoslovatskoy Sotsialisticheskoy Respubliki, Praga, i Kiyevskiy gosudarstvennyy universitet.

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The preparation of substituted pentamethinium salts. Coll  
Cz Chem 30 no.1:40-46 Ja '65.

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47-60

1. Institute of Organic Chemistry and Biochemistry of the  
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Institute of Organic Chemistry, Czechoslovak Academy of Sciences,  
Prague

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Navigation in the ice conditions of  
the Bay of Finland and the Baltic Sea under the  
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observation from aboard the icebreakers.  
Notes on hydrography, Volume 49, Leningrad, 1925.

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |          |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------|--|
| <p>002</p> <p>ARNOLD-ALYAS' REV, V.I.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <p>2</p> |  |
| <p>Chemical nature of the ice of Finnish Gulf and its solidity. V.I. Arnold-Alyashev. Ann. inst. anal. phys. chim. (Leningrad) 6, 229-33(1933).— The following observations can be made from the study of the relation between the chem. compn. and the solidity of ice from the Finnish Gulf. Ice retains some sea salts not only as mech. inclusions but also in soln.; the latter probably is a case of solid soln., and shows a selective dissolving power for sulfates and carbonates and not for chlorides. At high concn. freezing sea water incapable of discharging excessive salt undissolved in ice occludes it mechanically in the space between the crystals and thereby impairs the solidity of ice. The salinity of ice is increased by the rapidity of freezing; it is 3-10% in Arctic Sea ice (Malmgren, <i>Norw. North Polar Exped. with the Maud</i> 1, No. 5(1927)) and up to 30% in saline lakes (Listov, <i>West Russian Geographic Soc.</i> 8; Sarapkin, <i>Omsk Med. J.</i> 1928, No. 3)) and is caused mostly by the mech. inclusion of salts. The results of pressure tests fail to indicate a direct relation between the low solidity and high salinity of ice. In some cases less saline samples of ice showed lower strength. Chas. Blanc</p> |  |          |  |
| <p>ASB-11A METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |          |  |

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RT-1132 (Thickness of Kara Sea ice, its structure and porosity according to data collected by the expedition of the ice-going steamer "Malygin" in 1934) Moshchnost', stroenie i polostnost' l'da Karskogo moria po dannym ekspeditsii na i/p "Malygin" v 1934 godu.  
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Vrach.delo no.4:98-102 Ap'63. (MIRA 16:7)

1. Urologicheskoye otdeleniye (zav.-prof. A.Z.Tseytlin) fakul'-  
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instituta.

(KIDNEYS--TUBERCULOSIS)

ARNOL'DI, I.

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Professor S.M.Aranovskii; obituary. Gig. i san. 21 no.10:62 0 '56.  
(MLRA 9:11)

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Epidemiologists and Infectionists, 1959.

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[Hygienic problems in the acclimatization of the population  
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naseleniia na Krainem Severe. Moskva, Medgis, 1961. 261 p.  
(RUSSIA, NORTHERN--MAN--INFLUENCE OF CLIMATE) (MIRA 14:12)

ARNOL'DI, I.A., prof.

Conference on the problem of acclimatization and feeding of the  
population in the Far North. Biul. Uch. med. sov. 2 no.1:33-37  
Ja-F '61. (MIRA 14:10)  
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(RUSSIA, NORTHERN--FOOD SUPPLY--CONGRESSES)

ARNOL'DI, Iosif Aleksandrovich, prof.; SKORBILINA, T.N., red.;  
BASIMAKOV, G.M., tekhn. red.

[Acclimatization of man in the north and south] Akklimatizatsia  
cheloveka na Severe i IUge. Moskva, Medgiz, 1962. 71 p.  
(MIRA 15:12)

(MAN---INFLUENCE OF CLIMATE)

L 16943-63

APGC A/GW

EW(1)/ES(s)/ES(j)/ES(c)/ES(k)/EDS

Pb-4

AMD/AFPTC/AFMDC/

ACCESSION NR: AT3002179

S/2925/62/000/006/0049/0058

AUTHOR: Arnol'di, I. A.

TITLE: Hygienic acclimatization problems of the population in the Far North

SOURCE: AN SSSR. Komissiya po problemam Severa. Problemy Severa, no. 6, 1962. Trudy Nauchnogo soveshchaniya po problemam akklimatizatsii i pitaniya naseleniya na Severe, 49-58

TOPIC TAGS: acclimatization, extreme cold, physiological change, mining health conditions, fishing health conditions, Far North

ABSTRACTS: The author discusses factors affecting acclimatization on the basis of earlier studies in the Far North (1946-1957). He emphasizes that acclimatization is not a stable or uniform process for all latitudes of the Far North and optimal conditions for acclimatization to extreme cold are gradual adjustment (2-3° at a time) to the effects of microclimate factors. Those who move directly from southern climates to the Far North have most difficulty in acclimatizing and those who move from northern climates have the least. Adaptive processes fluctuate with the seasons and unfavorable physiological

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ACCESSION NR: AT3002179

shifts (disturbed basal metabolism, reduced body temperature, reduced number of erythrocytes, lowered hemoglobin, and drowsiness) occur during the polar nights, but during polar days the shifts are very favorable. Water resources were found to differ in the various areas both in chemical and bacterial content, and most were deficient in minerals and iodine. To compensate for these deficiencies water should be fluorinated and iodized salt should be used. Big industrial areas revealed considerable air pollution which reduces the beneficial effects of sun radiation and necessitates more ultraviolet radiation in plants and homes. For those working in mines it is strongly recommended that they have warmer clothing, better ventilation, heating systems, hot food and drink, noise reduction, and better lighting. For those in the fishing industry more labor-saving equipment, better waterproof clothing, heating devices, and training for extreme cold are necessary. The author firmly believes that acclimatization of man can be accelerated and regulated by conscious effort, optimal sanitary-hygienic conditions, improved housing, vitamin and mineral enriched diets, warmer clothing, more ultraviolet radiation, well organized work and recreation schedules, and eventually by controlling weather itself. Orig. art. has: none.

Card 2/3

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Review of discussions. Probl. Sev. no.6:234-247 '62.

(MIRA 16:8)

(Russia, Northern--Acclimatization--Congresses)

(Russia, Northern--Nutrition--Congresses)



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Dust in the air and its control in the mining enterprises  
of Noril'sk. Vop. bor' s sil. v Sib. No.1:93-98 '61  
(MIRA 16:12)

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Principles and methods of vocational guidance and consultation of adolescents. Sov. med. 26 no.11:127-131 N'62  
(MIRA 17:3)

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ARNOL'DI, I.A., prof., red.; GENESSKAYA, R.I., red.

[Industrial hygiene of adolescents] Gigiena truda pod-  
rostkov. Moskva, Meditsina, 1965. 330 p.  
(MIRA 18:4)

STRECHIN, E. V.

Explanation of zonal regularity in the formation of new groupings of insects and of insects and of the occurrence of xerophilous species in afforested steppe areas. Zool. zhur. 31, No. 3-1952

SO: MLRA, October 1952

1. ARNOL'DI, K.V., BOCHAROVA, O.M.
2. USSR (600)
4. Hemiptera - Caucasus, Northern
7. *Eurygaster integriceps* Put. in the mountains of north-Western Caucasus. Dokl. AN SSSR 84 No. 3 1952  
Institut Morfologii Zhivotnykh im. A.N.  
Severtsova Akademii Nauk SSSR Red. 12 March 1952
9. Monthly List of Russian Accessions. Library of Congress September 1952. UNCLASSIFIED.

Arnol'di, K. V.

Mar/Apr 53

USSR/Biology - Harmful Insects

"Forrest-and-Steppe Sources and the Method of Penetration of Forest Insects to Adjacent Steppes As a Result of Forestation of the Steppes," K. V. Arnol'di, Inst of Animal Morphology, Acad Sci USSR

Zool Zhur, Vol 32, No 2, pp 175-194

The results of studies on this subject have recently been published. They have thrown some light on the character of the movement of insects from steppe and forest-and-steppe (lesostep) areas of central Russia southward and the spread of harmful insects from shelter belts northward. The current and the forthcoming material will lay the foundation for better knowledge of the fauna and the flora found in the USSR.

265 T5

USSR/General and Special Zoology - Insects.

P.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30495

Author : Arnol'di, K.V.

Inst : Forest Institute of Academy of Sciences USSR.

Title : An Essay on the Entomological Fauna and the Nature of Entomological Complexes in Forest Floors of the Derkul Region.

Orig Pub : Tr. In-ta lesa AN SSSR, 1956, 30, 279-342.

Abstract : Surveys made in 1949-1953 amassed data for the characterization of the entomological fauna of the chief landscape entities: a) steppe and bush thickets b) "bayrach" forest, c) bottom lands of the river Derkul, d) forest plantings, e) exposed chalk strips and chalk hills, f) sands and sections in agricultural use. The nature of the entomological complexes of separate biocenoses,

Card 1/2



ARNOL'DI, K.V.

Attempts to determine invasion characteristics of *Eurygaster intergreps*.  
[with English summary in insert] Zool.zhur.35 no.7:990-1003 J1 '56.  
(MLRA 9:9)

1. Institut morfologii zhivetnykh imeni A.N. Severtsova AN SSSR.  
(Eurygasters)

RUMANIA/General Biology - General Ecology.

B

Abs Jour : Ref Zhur Biol., No 6, 1959, 23697

Author : Arnoldi, K.V., Ghilarov, M.S.

Inst : -

Title : The Soil Fauna of Mediterranean Biotope of the North-Western Caucasus and Its Significance for Their Characteristics.

Orig Pub : An. Rom.-Sov. Ser. biol., 1957, 11, No 2, 57-80

Abstract : The study of soil fauna of the Novorossiysk-Dzhankhota region (North-Western Caucasus) at the elevation of 100-200 m above sea level shows that the soil fauna consists basically of species which have Mediterranean origin. The majority of the representatives of soil fauna possess an insignificant ability to resettlement (Haploembia, Myriapoda, Isopoda, Lumbricidae etc). The soil fauna of biotopes, less changed by the activity of man, is closest to the Mediterranean. Therefore it is possible that

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- 34 -

HUMANIA/General Biology - General Ecology.

B

Abs Jour : Ref Zhur Biol., No 6, 1959, 23697

some of the forms of this fauna are tertiary relicts, pointing to the existence of biogeographical connections of North-Western Caucasus with other areas of Eastern Mediterranean, especially with Southern Crimea and, possibly, with Asia Minor and the Balkan peninsula. -- Yu.P. Zaytsev

Card 2/2

USSR/General Biology.-General Ecology.

R

Abs Jour: Ref Zhur-Biol., No 17, 1958, 76362.

Author : Gilyarov, M.S.; Arnol'di, K.V.

Inst :

Title : Soil Fauna of Treeless Mountain Peaks of the  
Northwest Caucasus as an Indicator of Their Soil Type.

Orig Pub: Zool. zh., 1957, 36, No 5, 670-690.

Abstract: The soil fauna were studied of the settled and meadow peaks of the Northern Caucasus, located in the forest belt. The nature and history of the settled treeless peaks were explained, their soils analysed and the direction of the soil formation process determined. A great quantity of steppe species were found which in their extent fit the chernozems (oribatids, myriapods, coleoptera, and their larvae,

Card : 1/2

*Arnol'di, K.V.*

ARNOL'DI, K.V.

Theory of the area of natural distribution, considered in connection with the ecology and origin of specific populations [with summary in English]. Zool. zhur. 36 no.11:1609-1629 N '57. (MLRA 10:11)

1. Institut morfologii zhivotnykh AN SSSR (Moskva).  
(Zoology--Ecology) (Zoogeography)

ARNOLDI, K. V. (Moscow)

"Criticism of the present conceptions of the structure of areas of species".

Theoretical and Practical Work Carried out by Entomologists.

reported at All-Union Entomological Conference, Georgian Dept. A-U

Entomological Society, Tbilisi, 4-9 Oct 1957.

Vestnik AN SSSR, 1958, v. 28, No. 1, p. 129-30 (author Gilyarov, N. S.)

ARNOLDI, K. (Moscow)

"On the Discontinuity of Distribution of the Populations in a Species  
and on the Structure of a Biocoenose"

Soviet paper presented at the 15th Intl. Congress of Zoology, London, 16-23 Jul 58

ARNOL'DI, K.V.; GILYAROV, N.Z.

Soil fauna of Mediterranean habitats of the northwestern Caucasus and its significance for their characteristics [with summary in English]. Zool. zhur. 37 no. 6:801-819 Je '58. (MIRA 11:7)

1. Laboratoriya pochvennoy zoologii Instituta morfologii zhivotnykh AN SSSR, Moskva.

(Caucasus--Soil fauna)



ARNOL'DI, K.V.

30(1)

AUTHOR:

Arnol'di, K. V., Doctor of  
Biological Sciences

SOV/30-59-2-46/60

TITLE:

Problems of Soil Zoology (Problemy pochvennoy zoologii)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 104-105 (USSR)

ABSTRACT:

The 1st All-Union Conference on these problems took place in Moscow from November 25 to 29, 1958. It was attended by representatives of the Ukrainskaya SSR, the Baltic and Central Asiatic Republics, especially from Uzbekistan, altogether 115 persons. From the many lectures which were heard the author briefly mentions the following:  
M. S. Gilyarov spoke of basic research problems of the zoology of invertebrates and the tasks of soil zoology.  
A. I. Zrazhevskiy, V. K. Eglitis, S. I. Ponomareva and V. F. Nikolyuk reported on problems of soil productivity in connection with the activity of invertebrates and their soil-forming rôle.  
I. I. Malevich reported on the investigation of earth worms.  
M. M. Aleynikov, Kazanskiy filial Akademii nauk SSSR (Kazan' Branch of the Academy of Sciences, USSR) reported on the

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soil fauna of the Tatarskaya ASSR.

V. K. Baluyev (Ivanovo) characterized the soil fauna of arable soils.

V. I. Grimal'skiy (Kiyev) reported on the soil-forming rôle played by ants in forests.

P. V. Matekin (Moscow) reported on the variability of the molluscs inhabiting the soil in connection with different conditions of life.

Yu. B. Byzova, N. P. Krivosheina, G. F. Kurcheva, B. M. Mamayev, L. M. Semenova, I. V. Stebayev, Laboratoriya pochvennoy zoologii Instituta morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Laboratory of Soil Zoology of the Institute of Animal Morphology imeni A. N. Severtsov of the AS USSR) delivered 8 reports, which were followed by reports of young zoologists from Moscow under the scientific supervision of M. S. Gilyarov. On this conference the existence of soil zoology as an independent and important subject was demonstrated and the necessity of its integration into the number of problems coordinated by the AS USSR was emphasized. The next conference on soil zoology will probably be held in Kiyev in 1961.

Card 2/2

ARNOL'DI, K.V.

"Soil coleopterans; supplement No.7 to the bulletin 'Life and environment' [in French] by Henri Coiffait. Reviewed by K. V. Arnol'di. Zool. zhur. 40 no.5:792-793 '61. (MIRA 14:5)  
(Mediterranean region--Beetles)  
(Soil fauna)  
(Coiffait, Henri)

ARNOL'DI, K.V.; ARNOL'DI, L.V.

Some basic ecologic conceptions applied to the theory on biocenosis.  
Vop. ekol. 4:6-9 '62. (MIRA 15:11)

1. Institut morfologii zhiwetnykh, Moskva i Zoologicheskiy institut  
AN SSSR, Leningrad.

(Biotic communities)

ARNOL'DI, K.V.; ARNOL'DI, L.V.

Biocenosis as one of the basic concepts of ecology, its structure  
and volume. Zool. zhur. 42 no.2:161-183 '63. (MIRA 16:3)

1. Institut of Animal Morphology, Academy of Sciences of the U.S.S. R. ,  
Moscow and Zoological Institut of the Academy of Sceinces of the  
U.S.S.R., Leningrad.

(Ecology)

ARNOL'DI, K.V.

Higher and special representatives of the genus *Cataglyphis*  
(Hymenoptera, Formicidae) in the fauna of the U.S.S.R.  
Zool. zhur. 43 no.12:1800-1815 '64 (MJRA 18:2)

1. Institut morfologii zhivotnykh AN SSSR, Moskva.

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|--|--------------------|--|
| 117 AND 118 COPIES                                                                                                                                                                                                                                                                                                                             |  | PRECISIONS AND PROPERTIES MODE |  | 119 AND 120 COPIES |  |
| <p>BC ARNDL' DI, L.V.</p> <p style="text-align: right;">17-4</p> <p> <b>Distillation of Black Sea fishes. L. V. ARNDL' and K. M. PONOMAREVA (Comp. read. And. Sci. U.S.S.R., 1957, 45, 513-516).--The wt. curves and the food consumption and assimilation of various fishes have been determined under aquarium conditions. W. O. K.</b> </p> |  |                                |  |                    |  |
| <p>AST-11A METALLURGICAL LITERATURE CLASSIFICATION</p>                                                                                                                                                                                                                                                                                         |  |                                |  |                    |  |
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ARNOLDI, L. V.

"A. P. Andriashev & L. V. Arnoldi: The Biology of Nutrition of Certain Benthic Fishes of the Black Sea." Received February 22, 1944. (p. 53)

SO: Journal of General Biology, Vol. VI, contents of the issues 1-6, for 1945. No. 1



LUK'YANOWICH, F. K., ARNOLDI, L. V.

Identification of several species of Curculionidae in the subfamily Cossoninae of the U.S.S.R. and adjacent countries of Europe and Central Asia. Ent. ob. 31. No. 3, 1951

SO: MLRA, September 1952.

ARNOL'DI, L.V.

Nodule weevils of the genus *Sitona* Germ. in the fauna of Tajikistan.  
Trudy AN Tadzh.SSR 5:43-55 '52. (MLRA 9:10)  
(Tajikistan--Weevils) (Legumes--Diseases and pests)



ARNOL'DI, L.V.

[Animal life in the U.S.S.R.] Zhivotnyi mir SSSR. Sostavili  
Arnol'di, L.V. i dr. Moskva, Izd-vo Akad. nauk SSSR, Vol. 4.  
[Forest fauna] Lesnaia zona. 1953. 1953. 737 p. ' (MLRA 7:7)

1. Akademiya nauk SSSR. Zoologicheskii institut.  
(FOREST FAUNA)

ARNOL'DI, I.V.

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Volga-Ural interfluvium. Trudy Zool. inst. 16:159-194 '54.  
(Caspian Depression) (Larvae) (MIRA 8:6)

ARNOL'DI, L. V.

Zoologicheskii institut. Pests of forests; a reference work Moskva, Ize-vo Akad. nauk SSSR, 1955. 2v. (55-59802)

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- I. Trees-Diseases and pests. I. Arnol'di, L.V.
- II. Pavlovskii, Evgenii Mikanorovich, 1884- ed.

ARNOL'DI, L.V.

New weevils (Coleoptera, Curculionidae) from Central Asia [with summary in English]. Ent.oboz.35 no.3:680-695 '56. (MIRA 9:10)

1.Zoologicheskii institut Akademii nauk SSSR, Leningrad.  
(Soviet Central Asia--Weevils)

ARNOL'DI, L.V.

Problems of heredity and development of new forms in I.V. Michurin's works and their elaboration in Soviet biology [with English summary in insert]. Zool.shur. 35 no.4:481-491 Ap '56. (MLRA 9:8)

1. Zoologicheskii institut AN SSSR.

(Michurin, Ivan Vladimirovich, 1855-1935)



AKRAMOVSKIY, N.N., ARNOL'DI, L.V., BEI-BIYENKO, G.Ya., BORKHSENIUS, N.S.,  
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[Animals of the U.S.S.R.] Zhivotnyi mir SSSR. Moskva. Vol. 5. [Mountain  
provinces of European Russia] Gornye oblasti evropeiskoi chasti  
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1. Akademiya nauk SSSR. Zoologicheskiy institut.  
(Zoology)

ARNOLDI, Lev V. (Prof., Dr.)

Leningrad

"Forest-Steppe-Zone as an important Zoogeographical Unit."

report presented at the Intl. Congress of Entomology, Vienna, Austria,  
17-25 August 1960.

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[Insect pests of corn in the U.S.S.R.; reference book] Naseko-  
mye, vrediashchie kukuruze v SSSR; spravochnik. Moskva, 1960.  
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1. Akademiya nauk SSSR. Zoologicheskiy institut. 2. Zoologi-  
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rasteniy Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni  
V.I.Lenina (for Lisina, Shapiro).  
(Corn (Maize)--Diseases and pests)  
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ARNOL'DI, L.Y.

Snout beetles of the tribe Mesostylini and the formation of  
the sandy desert fauna of Central Asia. Trudy Zool. inst.  
27:276-292 '60. (MIRA 13:9)

1. Zoologicheskii institut Akademii nauk SSSR, Leningrad.  
(Soviet Central Asia—Weevils) (Desert fauna)

ARNOL'DI, K.V.; ARNOL'DI, L.V.

Some basic ecologic conceptions applied to the theory on biocenosis.  
Vop. skol. 4:6-9 '62. (MIRA 15:11)

1. Institut morfologii zhivotnykh, Moskva i Zoologicheskii institut  
AN SSSR, Leningrad.

(Biotic communities)

ARNOL'DI, K.V.; ARNOL'DI, L.V.

Biocenosis as one of the basic concepts of ecology, its structure and volume. Zool. zhur. 42 no.2:161-183 '63. (MIRA 16:3)

1. Institut of Animal Morphology, Academy of Sciences of the U.S.S. R. , Moscow and Zoological Institut of the Academy of Sceinces of the U.S.S.R., Leningrad.

(Ecology)

ARNOL'DI, L.V.; KRYZHANOVSKIY, O.L.

Review of S.M.Iablokov-Khnsorian's book "Reproducing the genesis  
of the fauna of coleopterans in Armenia". Zool. zhur. 42  
no.5:786-792 '63. (MIRA 16:7)

(Armenia--Beetles)

ARNOL'DI, L.V.; GILYAROV, M.S., otv. red.

[Guide to the larvae of soil insects] Opredeletel' obitaiushchikh v pochve lichinok nasekomykh. Moskva, Nauka, 1964. 918 p.  
(MIRA 17:12)

1. Akademiya nauk SSSR. Institut morfologii zhivotnykh.



KRYZHANOVSKIY, Oleg Leonidovich; ARNOL'DI, L.V., otv. red.

[Composition and origin of the terrestrial fauna of  
Central Asia; mainly based on materials on Coleoptera]  
Sostav i proiskhozhdenie nazemnoi fauny Srednei Azii;  
Glavnym obrazom na materiale po zhestkokrylym. Moskva,  
Nauka, 1965. 418 p. (MIRA 18:11)

ARNOL'DOV, A.

Militant helper of the committee. Voen.znan. 37 no.7:23-24, J1 '61.  
(MIRA 14:6)

1. Chlen gorodskogo komiteta Vsesoyuznogo dobrovol'nogo obshchestva  
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(Wall newspapers)

ARNOL'DOV, Arnol'd Isayevich, kandidat filosofskikh nauk; ZAVELEV, L.A.  
redaktor; GUBIN, M.I., tekhnicheskiy redaktor.

[Development of science in people's democracies] Razvitie nauki  
v stranakh narodnoi demokratii. Moskva, Izd-vo "Znanie," 1957.  
46 p. (Vsesoyuznoe obshchestvo po rasprostraneniю politicheskikh  
i nauchnykh znaniy. Ser.2, no. 10) (MLRA 10:6)  
(People's democracies--Science)

Arnol'dov, A.I.

AUTHOR: Arnol'dov, A.I., Candidate of Philosophical Sciences 25-9-2/40

TITLE: Science in Socialist Countries (Nauka v stranakh sotsializma)

PERIODICAL: Nauka i Zhizn', 1957, # 9, p 1-4 (USSR)

ABSTRACT: World wide socialism has changed the political, economic and spiritual life of hundreds of millions of people. Socialist governments are promoting science with all available means. Since 1950, almost all academies of sciences in people's democracies have set up one-year or five-year plans for research work, covering problems of special importance and the scientific training of young scientists.

The author mentions a series of examples: the Chinese scientist Chshay Zhen' has developed a method of manufacturing superdurable pig iron, with properties similar to those of steel. Atomic research has been extremely successful: the USSR has built the first commercial nuclear power plant in the world, Czechoslovakia has established an Institute of Nuclear Physics and intends to build its first nuclear power plant by 1960.

In Poland, near Warszawa and at Krakow, large atomic research centers are under construction. Yugoslavia conducts nuclear research on a large scale in three institutes at Zagreb, Lyublin and Vinche. The first cyclotron and an experimental nuclear

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